

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Original) A method for determining the presence of colorectal tumors or pre-cancerous lesions in a human subject, which comprises:

- a) DNA extraction from stool samples
- b) PCR amplification of at least three different DNA fragments with a length of 100 base pairs or more, using deoxynucleotide triphosphates or primers labelled with detectable markers;
- c) quantitation of the amplified fragments (amplicons);
- d) calculation of the total amount of different amplicons;
- e) comparison of the values obtained in (d) with a reference value.

2. (Original) A method according to claim 1, wherein the detectable markers used in step (b) are fluorescent molecules.

3. (Original) A method according to claim 2, wherein said fluorescent molecules are selected from HEX, 6-FAM and TAMRA

4. (Original) A method according to claim 1, wherein at least 8 different DNA fragments are amplified in step (b).

5. (Original) A method according to claim 1, wherein the DNA fragments are from 100 to 500 bp.

6. (Original) A method according to claim 1, wherein the DNA fragments span different regions of p53 or APC genes.

7. (Currently Amended) A method according to claim 6, wherein p53 fragments corresponding to exons 5-8 are amplified using the following pairs of primers (SEQ ID NOS 1-8 respectively in order of appearance):

- a) ctcttctctgcagtactccccctgc; gccccagctgctcaccatcgcta;
- b) gattgctcttaggtctggcccctc; ggccactgacaaccacccttaacc;
- c) gcgttgctctcctaggttggtctg; caagtggctcctgacctggagtc;
- d) acctgatttccttactgcctctggc; gtcttgcttgcttacctcgcttagt;

8. (Currently Amended) A method according to claim 6, wherein APC fragments are amplified using the following pairs of primers (SEQ ID NOS 9-16 respectively in order of appearance):

- a) aactaccatccagcaacaga; taatttggcataaggcatag;
- b) cagttgaactctggaaggca; tgacacaaagactggcttac;
- c) gatgtaatcagacgacacag; ggcaatcgaacgactctcaa;
- d) cagtgatcttccagatagcc; aaatggctcatcgaggctca

9. (Original) A method according to claim 1, wherein the amplicon quantities are interpolated on a calibration curve obtained from known DNA amounts.

10. (Original) A method according to claim 1, wherein the amplicons are quantified with an automatic sequencer/analyser or using fluorimetric, calorimetric, radioactive or spectrophotometric detection systems.

11. (Original) A method according to claim 1, wherein the reference value is determined on the basis of case series comprising healthy subjects and patients affected by colorectal tumor or lesions.

12. (Original) A kit containing oligonucleotides, labelling agents, a thermostable DNA polymerase and user instructions to carry out the method of claim 1.